



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

June 1, 2018

Kirk Nicholes, Resident Agent
Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720

Subject: Conditional Approval of North Private Lease Open Pit Expansion, Alton Coal Development, LLC, Coal Hollow Mine, C/025/0005, Task #5686

Dear Mr. Nicholes:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Include in the clean copies the requested corrections identified by Keenan Storrar on May 30, 2018. Please submit these copies by June 22, 2018. Once we receive these copies, final approval will be granted.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan.

If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/sqs

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0250005
TaskID: 5686
Mine Name: COAL HOLLOW
Title: NPL OPEN PIT EXPANSION

General Contents

Permit Application Format and Contents

Analysis:

The applicant has met the requirements of R645-301-120 for Permit Application Format and Content.

The application proposes to expand the disturbed area of the North Private lease by 14.16 acres. This amounts to less than a 7 percent increase in the 239 acre disturbed area of the North Private Lease. As such, the change qualifies as an incidental boundary change and the application does not need to be processed as a significant revision as categorized under R645-303-224. The application will be processed as a permit amendment.

dhaddock

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for historic and archeological resource information. The amendment proposes expanding the northeast boundary of Area 2 of the North Private Lease. According to cultural resource reports found in Appendix 4-1 of the confidential MRP, there are no known sites within, or adjacent to, the area of the expansion.

tmiller

Vegetation Resource Information

Analysis:

The amendment meets the State of Utah R645-301-320 requirements for vegetation resource information. Plate 3-11, Reclamation Treatments, Monitoring & Sample Locations, has been updated with this amendment to include the expansion area of Area 2. The seeding mix for Area 2 is a pasture mix detailed on Table 3-38 in Chapter 3 of the MRP. Additional vegetation information for the expansion area is found on Drawing 3-1, Vegetation Map, of the MRP.

tmiller

Fish and Wildlife Resource Information

Analysis:

The amendment meets the State of Utah R645-301-322 requirements for fish and wildlife resource information. Wildlife information already included in the MRP covers the expansion of Area 2. Important habitats for black bear, mule deer, Rocky Mountain elk, and sage grouse are found in the area. Information related to these species can be found on Drawing 3-2, Black Bear Habitat Map; Drawing 3-3, Rocky Mountain Elk Habitat Map; Drawing 3-4, Mule Deer Habitat Map; and Drawing 3-5, Sage-Grouse Brood Habitat Map. Additional wildlife information is found in Appendices 3-9 and 3-10 of the MRP. The primary wildlife concern in this area lies with the greater sage grouse (*Centrocercus urophasianus*). Projects mitigating the proposed 239 acres of disturbance in the North Private Lease have so far totaled 891.79 acres with another 108.21 acres still planned for bringing the total mitigation acreage to 1,000 acres for 239 acres of disturbance.

tmiller

Alluvial Valley Floors

Analysis:

The amendment meets the State of Utah requirements for Alluvial Valley Floor Determination.

The Division found during the initial permitting of the North Private Lease there is no alluvial valley floor south of the Farm Road. Refer to Tasks #4641 and #4704 for information regarding the absence of an alluvial valley floor south of the Farm Road and the Division's findings on the subject.

kstorrrar

Geologic Resource Information

Analysis:

The application meets the requirements of the R645-301-623 rules for geologic information.

The expansion of the North Private Lease disturbed area by 14.16 acres takes place all within the existing permit boundary and within the same formations as currently approved. Since the coal seam and strata dip toward the Northeast, the depth of overburden will increase and may ultimately limit the extent of the mine pits. The lithologic characteristics of the formations should remain constant with the coal seam being approximately 16 feet in thickness.

dhaddock

Hydro Baseline Information

Analysis:

The amendment meets the State of Utah R645 requirements for Baseline Information.

The amendment has already provided baseline water monitoring data within the North Private Lease in Task #5369. Refer to this amendment and the Division's findings for additional information on this subject.

kstorrrar

Hydro Baseline Cumulative Impact Area

Analysis:

The amendment meets that State of Utah R645 requirements for Baseline Cumulative Impact Area.

The Baseline Cumulative Impact Area (CHIA) boundary does not change with the proposed mine expansion. The CHIA does not need to be updated for this amendment.

kstorrrar

Probable Hydrologic Consequences Determination

Analysis:

The amendment meets the State of Utah R645 requirements for Probable Hydrologic Consequences Determination.

The amendment has already analyzed the Probable Hydrologic Consequences of mining within the North Private Lease in Task #5369. Refer to this amendment and the Division's findings for additional information on this subject.

kstorrar

Operation Plan

Topsoil and Subsoil

Analysis:

The application meets the requirements of R645-301-231.100, method for removal and storage of topsoil and subsoil.

Permit disturbed areas (1, 2, &3) total 239 on Drawing 2-4. This amendment increases the disturbed Area 2 by 14.16 acres. The revised disturbed area boundary includes the NE1/4 Sec 12 in T39S R6W and follows Kanab Creek in T39S, R5W Sec 7 and 18. Most of this increased disturbance is on G. Ferril & Dorothy Heaton land (designated GDH), in prime farmland soil map units G and E.

Dwg 2-4 Topsoil handling plan shows the new disturbed boundary and provides estimated salvage quantity by soil type and landowner for 67.82 acres of non-prime farmland in Area 2 and 44 acres of Prime Farmland soils in Area 2 (Total = 112 acres). Some of the Area 2 soils have already been salvaged from Pond 7 north to the North boundary of Pit 15 along the elk fence (the section line between Section 12 and 13 in R6W (7 & 18 in R5W). i.e. All of A2-Heat-1 soils and A2- Other-1 soils have already been recovered. Aside from the Prime Farmland soils, this leaves 17.68 acres in Area 2 to be recovered. Of this acreage, the 7.47 acres of A2-HEAT-2 soils will be live-hauled. Dwg 2-4 also outlines salvage from 57.23 acres of non-prime farmland in Area 3. Dwg 2-3 also outlines the prime farmland and farmland of statewide importance and has the current topography lines.

A2-OTHER-2, -3, and -4 non-prime farmland soils will be stockpiled in Area 1 in the existing topsoil and subsoil stockpile locations as shown on Dwg 2-4. The A2-OTHER soil volume is provided in the table on Dwg 2-4. This will bring the existing NL topsoil pile to approximately 78,000CY and the existing NL subsoil pile to approximately 103,000 CY. The capacity of both these stockpiles as drawn on Dwg 2-4 is 125,000 CY, with 1h:1v side slopes. These piles extend over Phase 1 bond release areas BRP1-10 and BRP1-12 in Area 1. Prime Farmland soils will be stockpiled in designated as shown on Dwg 2-4, along the permit boundary in Area 2 or above BRP1-12 and BRP1-13 in Area 1. Silt fence will be installed along the downhill side of all prime farmland soils.

Section 231.100 of the MRP describes the protection and handling of topsoil already re-distributed over BRP1-10, BRP1-12 and BRP1-13 (p. 2-25). Topsoil will be removed from accessways and stored in a berm along the access way (and seeded). Topsoil beneath the stockpiles will be separated from the prime farmland with an organic layer (wood chips). The required 3h:1v side slopes are shown for all prime farmland stockpiles on Dwg 2-4. Accessways between the stockpiles which will be required during operations and reclamation are also shown.

Salvage and Storage Plans

The salvage plan in Section 231.100 (and Sec. 523) states that the depth of soil salvage will be determined in the field by a Coal Hollow environmental technician in consultation with a certified soil scientist (p. 2-24). The oversight of this process by a Certified Professional Soil Scientist is stressed several times within the Order II Soil Survey (Vol 11, p. 41-43), because the topsoil and subsoil salvage depths described are for planning purposes, but actual depths will vary in the field. Section 231.100 and Section 232.100 of the topsoil salvage plan includes the use of pedestals for quality control and for later confirmation of topsoil and salvage depth by the CPSS.

Section 232.100 provides an estimated salvage recovery table for the North Lease, which includes Areas 2 & 3 (p. 2-27 to 2-28). The table indicates that on average 11-12 inches of topsoil and 37 inches of subsoil (48 inches total) will be salvaged from all map units within Areas 2 & 3. Estimated topsoil and subsoil quantities for Areas 2 & 3 prime farmland and non-primefarmland soils are stated in Tables on Dwg 2.4 (1 in. = 200 ft.). Soil Map Units and recovery depths are also depicted on Dwg 2-3 (1 in. = 500 ft.). Supplemental Volume 11, Map 10 also provides the estimated salvage depth of topsoil and subsoil by Map Unit in all areas of the North Lease (1" = 500 ft.). This revision of Dwg 2-4 replaces original topography with reclaimed topography. Original topography is preferable on Dwg 2-4 because of the scale

difference between Dwg 2-4 and 2-3, the topography allows the user of the maps to correlate between them.

Sediment control during soil salvage is shown on Dwg. 5-48, 5-48A, 5-65 and 5-65A. Soil will be recovered using dozers or scrapers (Section 231.100). Stockpiles will be constructed with 3h:1v slopes and will be bermed as described in Section 231.400. In accordance with the requirements of R645-301-234.230, all piles will be stabilized by seeding either with an interim mix or in the off-season, a cover crop (Quick Guard) (Sections 231.100 and 231.400 and Section 244.100). Stockpiles in place for longer than a year will also be mulched (Section 231.100). During contemporaneous reclamation activity, tackifier will be used to stabilize slopes of partially consumed, reshaped topsoil stockpiles, pending re-seeding in appropriate season (late fall, Sections 234.230 (c) and Section 244.100).

The depleted Area 1 topsoil and subsoil stockpiles will be replaced by one Area 3 Map Unit C topsoil/subsoil pile holding 55,000CY, which will be used along with 55,000 CY topsoil and 114,374 CY subsoil live-hauled from A3-OTHER to reclaim Area 3.

The timing of topsoil removal (R645-301-232.600) precedes overburden removal. The sequence for overburden removal is shown on Dwg 5-57 and described on page 5-56 as occurring first in Pits 1 – 10, then 11 – 21, then HWT 1.

In Area 2: Prime farmland soils will be encountered above the N and East of Pit 15 all the way through Pit 21. Prime Farmland handling procedures are discussed under Special Categories of Mining/Prime Farmland Operation Plan.

pburton

Hydrologic Ground Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment includes information on the extent of the proposed open pits in relation to the groundwater monitoring wells within the North Private Lease. The proposed mine plan extends the open pits further to the east than previously planned. Groundwater monitoring wells that were originally going to be left undisturbed will now be destroyed by mining activities. The Division conducted an inspection at the site on May 8th, 2018 to determine if the proposed groundwater monitoring plan will provide sufficient monitoring of the hydrologic resources within and adjacent to the proposed mining activity.

During the site visit it was determined that wells CN1-58 and CN0-60 will sufficiently monitor groundwater levels in Area 2 as mining progresses northward according to the proposed mine plan. These two wells are already part of the groundwater monitoring plan, so continued monitoring at these sites will provide a robust data set of the groundwater response to mining in the alluvial fill aquifer. Well CN1-58 will monitor groundwater levels to the east of the open pits, or within the undisturbed stream buffer zone area between the mine and Kanab creek. Water levels in this well will show the direction of the groundwater gradient flowing toward or away from Kanab creek. While Well CN0-60 is at the northern extent of the open pits. This well has always provided data on the status of the groundwater to the north of mining activities and will continue to provide these data. Additionally, wells CN3-81, CN3-81, and CN3-98 will be left undisturbed. These three wells form a triangle to allow orientation and dip of the groundwater table in this part of Area 2 to be measured. Active mining is taking place to the west of these wells currently.

The amendment updated Drawing 7-10, Table 7-10, and the water monitoring plan to show the water monitoring locations that will be left and destroyed during mining in Area 2. Drawing 7-10 shows wells CN1-58, CN0-60, CN3-81, CN3-81, and CN3-98 will stay in place as mining progress to the north. Groundwater monitoring wells that will be mined through include (from south to north) Y-70, NLP-10, CN3-69, CN3-93, NLP-2, Y-103, NLP-1, and CN1-43.

kstorrar

Hydro Surface Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The amendment does not change the currently approved surface water monitoring program.

Hydrologic Diversion General

Analysis:

The amendment meets the State of Utah R645 requirements for Diversions.

Farm Road ditch:

The amendment proposes to change the length and location of ditch UD-14 to convey undisturbed runoff north of Area 2 from watershed UA-4 to Kanab Creek. The new ditch alignment will run parallel along the farm road and end at the creek. The updated lengthwise cross-section of UD-14 is shown in Drawing 5-72. The cross-section of UD-14 shows the topographic low of the farm road is 1,800 feet from the creek and the ditch steadily slopes to the east as the land rises. This causes the proposed cut depth of the ditch to be 20 feet deep about 100 feet west of the creek. At this depth with a 2H : 1V setback the width of the proposed ditch is 80 feet wide at the top. It is not possible to achieve this width without significantly altering the farm road or causing significant disturbance to the south of the road. The amendment provides a narrative in Appendix 5-12 that BTCA sediment control measures will be implemented along this large path of disturbance to prevent sediment erosion from the exposed setback banks from reaching Kanab creek.

Berm and ditches along eastern disturbance of Area 2:

Disturbed area runoff within Area 2 will be kept within the bounds of the disturbance by the berm running north-south along the eastern boundary and also by DD-13 reporting to Sediment Pond 7. Drawing 5-66 'North Area Sediment Control Area Watersheds' shows how disturbed area surface runoff will be kept separate from undisturbed area surface runoff. Appendix 5-12 provides a narrative on the berm as well.

A berm is all that is needed along much of the eastern edge of disturbance in Area 2 because runoff from both pre- and post-mining topography runs to the southwest or back into the disturbed area. All water introduced into the disturbed Area 2 will only be from precipitation because undisturbed ditch UD-14 will divert all undisturbed runoff at the north end of the permit area into Kanab creek. At the southern end of the berm DD-13 begins. This ditch is already installed and conveys disturbed area runoff to Sediment Pond 7 where it is treated.

kstorrar

Maps Monitoring and Sampling Locations

Analysis:

The amendment meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

The amendment has updated the water monitoring map Drawing 7-10 to show the current monitoring network. The drawing has also been updated to show the wells that will be destroyed by mining activities in the North Private Lease.

kstorrar

Reclamation Plan

General Requirements

Analysis:

The amendment meets the State of Utah R645 requirements for General Requirements.

R645-301-512, R645-301-521 - This amendment is proposing a change to the approved mine plan in the North Private Lease area of the Coal Hollow Mine. Specifically, the Permittee is seeking to modify the boundaries of Area 2 of the North Private Lease to allow the option to surface mine areas that were previously proposed to be mined by highwall methods. This alteration necessarily requires that changes be made to surface facilities dealing with drainage control, the most significant of which is a reduction in the length of UD-14. Previously UD-14 was designed to divert drainage from undisturbed areas north of Area 2 around Pits 11 - 21 to the east, parallel to Kanab Creek and eventually draining into Kanab Creek slightly north of Pond 8. The new design proposes to drain the undisturbed areas north of Area 2 due east, draining directly into Kanab Creek without redirecting flow south as shown in Drawing 5-65.

The North Haul Road location, which was previously designed to run adjacent to the western Permit Boundary has been redesigned to run directly north through the middle of all pits in Area 2, which will facilitate easier handling of reclamation pit volumes going forward. This configuration also enables Permittee to complete construction of a permanent county road that will be located over the reclaimed surface of Pits 6 - 10 as illustrated in Drawing 5-49.

Previously, stockpiles containing topsoil from the prime farmlands were planned to be located directly above Pits 11 through 13, but will now be moved south to reside above reclaimed Pits 3 through 5 as shown in Drawing 2-4 and 5-51B. This was a necessary change since the North Haul Road will now reside where the Farmland stockpiles would have been located, and relocating the Farmlands stockpiles would also enable Permittee to harvest these soils sooner than anticipated.

An important distinction between the current mine plan and the plan proposed in this amendment is how the Area 2 reclaimed pits will be contoured. The amendment proposes to reshape the approximate original contour (AOC) of the reclaimed pits to drain south into Pond 7 as shown in Drawings 5-65 and 5-66. This change in AOC is achieved by backfilling Pits 11 - 21 with an approximate 2% grade sloping south. An intended consequence of this slight change in AOC results in an eventual surplus of overburden once mining progresses beyond Pit 17. This surplus results in a scenario where Pit 21 may be backfilled with overburden adjacent to the pit instead of harvesting backfill from HWT 01 and HWT 02 in Area 3.

jeatchel

Topsoil and Subsoil

Analysis:

The application meets the requirements of R645-301- 242, soil redistribution plan.

Section 232.300 refers to Table 14, Vol. 11 (p. 44) for the estimated salvage quantities and replacement depths of topsoil and subsoil from the non-prime farmland map units. The estimated topsoil replacement depth will follow the average recovery for non-prime farmland soils as stated in Section 232.200 and restated in Section 233.100-400, as follows: 18 inches in Area 1, 11 inches in Area 2, and 12 inches in Mine Area 3.

Substitute subsoil testing is described in Section 232.300, following procedures described in Section 232.720 for Area 1. Dwg 5-76A shows the sample locations on a grid within Area 1. No areas of sampling are proposed for Areas 2/3 on Dwg 5-76A, because the Permittee believes that there are sufficient sources of native subsoil to provide the 48 inches of total cover (Section 232.720, p. 2-33). Overall for Areas 2 and 3, an average subsoil replacement depth of 37 inches is stated in Section 232.100 (Table p. 2-28). Where replacement falls short of three feet depth, the Division will request that regraded spoils are sampled for suitability within the root zone.

The Permittee will track the soil during replacement of topsoil and subsoil using a balance sheet (Chapter 2, p. 3-36 and Appendix 2-2). New Appendix 2-7 contains tables with soil balance for bond release areas.

Soil redistribution to a uniform, stable thickness, prevention of compaction, ripping, discing on the contour, and seeding and mulching is described in Chapter 2 Sections 242 through Sections 244.200. It specifies that stockpile locations and accessways will be ripped to a depth of 18 – 24 inches prior to (placement of topsoil) and reseeded. Section 242.200 further states that all compacted areas (primary roads and all other heavily trafficked areas) will be ripped to a depth of 18 – 24 inches prior to subsoil placement.

Earthwork reclamation sequence is found on Dwg 5-76A Facilities reclamation is described on Dwg 5-76B. Pre-mining topography is shown on Dwg 5-45. Post-mining topography is shown on Dwg 5-74 for the entire site. Dwg 5-74A illustrates Area 1. Dwg 5-74B illustrates Area 2. Dwg 5-74C (Area 3) illustrates a material void in Area 3, as described in Chap 5, Section 521.141, page 5-15. Chapter 5 Bond polygons are shown on Dwg 5-77. Post mining surface hydrology is found on Dwg 5-79.

pburton

Hydrological Information Reclamation Plan

Analysis:

The amendment meets the State of Utah R645 rules for Hydrologic Reclamation.

The amendment proposes to slightly alter the final grade of the reclaimed surface, altering reclaimed area flow paths.

The final grade drains to the same location, but ditch RC-4 will be eliminated and runoff will now be conveyed in ditches RC-4A and RC-4B. The amendment provides updated calculations of flow velocities along the ditch in Table 8 of Appendix 5-12. Where flow velocities are calculated to be higher than 5 fps the ditch will be adequately armored with riprap and a filter blanket.

kstorrar

Maps Reclamation Final Surface Configuration

Analysis:

The application meets the requirements of R645-301-622 for the reclamation cross-section and maps of the area to be mined.

Drawing 5-74 is a post-mining topography map for the North Private lease area. It is accompanied by Drawing 5-74a, 5-74b, and 5-74c which are more detailed maps for the specific mine areas 1,2 & 3. Drawing 5-75 shows the post mining topography cross sections A - A' through G - G'. The cross sections show areas of backfill and specifically areas of fill above the final contour and areas of void below the final contour. These cross sections allow for the determination of approximate original contour. While there are some areas of excess fill and some areas of void, the overall topography matches the pre-mining topography. There is one location on the East side of Kanab creek that will possibly have a lower profile than original contour because of the need for fill for pit 21, however, the lower profile will actually improve the area for use as agricultural ground.

dhaddock

Bonding Determination of Amount

Analysis:

The amendment meets the State of Utah R645 requirements for Determination of Bonding Amount.

R645-301-830 - The amendment is proposing a change to the approved mine plan in the North Private Lease area of the Coal Hollow Mine. Specifically, the Permittee is seeking to modify the boundaries of Area 2 of the North Private Lease (NPL) to allow the option to surface mine areas that were previously proposed to be mined by highwall methods.

The increase in proposed surface mining results in an increase in disturbed acreage. This amendment only deals with changes in the North Private Lease, and the acreages and volumes for all of the pits and surfaces have been accounted for in this submittal. The proposed surface disturbance for the North Private Lease increases from 224.8 to 239.0 acres because the remainder of the unmined pits in Area 2 will be extended further east. The increased mined acreages also results in an increase of volumes from approximately 9.2M to 10.9M bank cubic yards.

The increased volume will be backfilled into the mined out pits in a manner that supports the proposed reclamation contours, preserving a gradual 2% slope to the south. The proposed backfill plan will result in a net surplus of overburden that accumulates as mining advances north in Area 2. This enables Pit 21 to be backfilled with overburden from the adjacent reclaimed pits as opposed to harvesting material from Area 3 and hauling it over Kanab Creek. Additionally, the revised mining plan calls for backfilling Pit 21 with overburden directly from within Pit 21 itself, backfilling the mined out void as mining progresses east. In addition to not requiring backfill from the HWT 01 and HWT 02 zones of Area 3 for Pit 21, Permittee proposes to no longer reclaim Borrow Areas from Area 3 because those areas will remain undisturbed.

Taking into account the proposed changes to the North Private Lease, the Phase 1 Bond amount decreased slightly from \$2,427,938 to \$2,348,731 dollars, but the Phase 2 Bond amount increased by \$67,655 dollars, and the Phase 3 Bonding costs also increased by \$18,171 dollars. The total bond amount for the North Private Lease increased slightly from \$4,729,964 to \$4,736,582 dollars.

jeatchel

Special Categories

Prime Farmland Soil Removal and Stockpiling

Analysis:

The application meets the requirements of R645-302-317.400, Prime Farmland soils handling.

In accordance with R645-302-317.410, prime farmland soil will be removed prior to drilling, blasting or mining and prime farmland soil handling will be minimized when soils are saturated. The Division recommends that all prime farmland within a bonding unit is sampled and recovered at one time allow for soil recovery during an appropriate season and to allow mining to continue uninterrupted.

In Area 2: Prime farmland soils will be encountered North of Pit 15 to Pit 21 and East to Kanab Creek (refer to Dwg 5-57 and 5-53). Procedures described in Chapter 9 for Prime Farmland soil removal and stockpiling (Vol 9, Section 317.400 et seq). These procedures include sampling by horizon one sample per 2 acres prior to salvage; salvage by landowner and by horizon. A certified, professional soil scientist will be at the site to monitor the soil sampling and prime farmland soil salvage by horizon within land ownership boundaries.

Salvage of Prime Farmland Soils is discussed in Vol 11, pages 41-43. Volume of salvage by horizon and Map Unit is summarized in Table 13. The volume to be salvaged by landowner acreage is provided in a Table on Dwg 2-4. Prime farmland topsoil stockpiles are illustrated on Dwg 2-4 and Dwg 5-51B. The topsoil piles are shown in cross section. These stockpiles are labeled by landowner: Dean R Heaton (DRH); G. Ferril and Dorothy Heaton (GDH); and Orval & Gretta Palmer (OGP).

pburton

Prime Farmland Soil Replacement

Analysis:

The application meets the requirements of R645-302-316.500. The final topography in the prime farmland North of the elk fence in Area 2 will maintain prime farmland characteristics of no greater than 3% slope with an erodibility factor of 2.0 or less.

Forty-four acres of prime farmland will be affected by surface mining (Dwg. 2-4). The proposed final topography portrayed on Drawing 5-74B will create land which has a maximum slope of 2.8% in T 39S, R5W, Sec. 6, and 3% grade in T 39 S, R 6W Sec 12. This is consistent with Map 7 of the Supplemental report illustrates the existing slope of the prime farmland in Sec 12 and Sec 7 as 0 – 3% slope. In addition, the final topography will remove an incised gully to create 1.82 acres of additional prime farmland (A2-OTHER-4 on Dwg 2-4).

The criteria for prime farmland are listed in Table 4 of the Supplemental Reports Volume 11. Erodibility by water is a criterion that must be less than 2.0, as determined by the K factor times the slope. Chapter 9, Section 316.500 provides the K factor, maximum slope and erodibility factor for the farmlands of statewide importance and prime farmland soils. The maximum erodibility factor of the final topography in prime farmland will be 1.76 in the B/C horizon, which meets the erodibility criterion for prime farmland.

pburton